

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Scott D. Lucas et al.

Group Art Unit: 1771

Serial No.: 09/317,409

Examiner: Befumo, J.

Filed: May 24, 1999

Docket No.: 98035-01

For: PRODUCTS AND METHOD OF CORE CRUSH PREVENTION

**REQUEST FOR RECONSIDERATION**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

In response to the December 19, 2001 final Office Action, a three month extension of time having been requested and the requisite fee having been submitted, reconsideration of the final rejection of the above-identified application is requested in view of the following remarks.

***Claim Rejection - 35 USC §112***

Claim 55 and 57-59 are rejected under 35 USC §112, first paragraph. Specifically, the Office Action contends that although the disclosure does not specifically teach using tie down plies with the present invention, no where in the disclosure does it teach that the invention is produced in the absence of tie down plies. In other words, there is no literal support for the claim as amended. This rejection is hereby traversed.

Literal support is, however, not the standard by which rejections under 35 USC §112, first paragraph should be measured. The subject matter of (an amended) claim need not be described literally or "*in haec verba*" in order for the specification to satisfy the description requirement. In re Lukach, 442 F. 2d 967, 969, 169 USPQ 795 (CCPA 1971). See also Fields v. Conover, 443 F. 2d 1393, 1395, 178 USPQ 288, 289 (CCPA 1971); Sun Products Group Inc. v. B & E Sales Co. Inc., 700 F. Supp. 366, 9 USPQ 2d 2009 (E.D. Mich. 1988); Nelson v. Bowler, 1 USPQ 2d 2076, 2078 (Bd. Pat. App. & Int'f. 1986) ("It is not necessary that the claimed subject matter be described *in ipsius verbis* to satisfy the written description requirement of 35 USC 112."). It is sufficient that the specification "convey clearly to those skilled in the art, to whom it is addressed, in any way, the information that the applicant has invented the specific subject matter later claimed." (Emphasis added.) In re Wertheim, 541 F. 2d 257, 262, 191 USPQ 90, 97 (CCPA 1976) appeal after remand, 646 F. 2d 527, 209 USPQ 554 (CCPA 1981).



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On page 1, at lines 20-26, the specification identifies core crush as being a major problem in the manufacture of honeycomb sandwich structures. Further on page 1, at lines 33-38 and on page 3, at lines 24-29, the specification teaches "tie downs" as exemplary known "mechanical/physical" means for keeping prepreg plies from differentially moving during autoclave and thereby reducing the core crush. On page 2, at lines 11-13 and at page 3, lines 33-37, the specification faults known methods, (i.e., tie downs) of reducing core crush with increasing production costs and at times failing to provide satisfactory reduction of the problem.

Accordingly, the specification calls for new and better honeycomb sandwich structures exhibiting reduced core crush (page 5, lines 19-21) and for prepreg plies having constrained differential movement during manufacture (page 5, lines 23-25). On page 5, at lines 34-38, the present invention credits ASTM stiffness values of the fabric component of prepreg plies and honeycomb sandwich structures as influencing the differential movement of prepreg plies and the core crush value and looks to provide ways of altering the ASTM stiffness accordingly. Beginning on page 11, at line 36 through page 12, line 4, the invention is said to provide honeycomb sandwich structures that are stiffness treated to exhibit reduced core crush and that further, the invention prepreg plies, which are stiffness-treated have constrained differential movement against other prepreg plies.

Given the foregoing and the fact that the office Action already acknowledges that "the disclosure does not specifically teach using tie down plies with the present invention," one of skill in the art would therefore conclude that the present invention uses stiffened fabric components in prepreg plies and sandwich structures instead of known "tie downs" to constrain differential movement and hence prevent core crush.

The Office Action goes on to cite Ex parte Grasselli as authority for the blanket contention that negative limitations recited in the claims that did not appear in the specification as filed introduce new concepts and violate the description requirement of 35 USC §112. It is respectfully submitted that this aspect of Ex parte Grasselli is not intended to apply to all situations wherein there has been a negative limitation introduced into a claim, but rather to a specific situation wherein there is introduction of an express exclusion of certain elements not discussed in the original specification. Here, the use of stiffened fabric instead of tie down plies is, as set forth in more detail above, clearly part of the present specification. Hence, the conclusion based on Ex parte Grasselli that the negative limitation in amended claim 55 is not supported by the disclosure is unfounded.

The Office action further concludes that the claimed invention is not enabled by the specification because "the disclosure does not teach or even suggest the absence of a layer which mechanically or physically prevents the slippage of the prepreg layer, the basis of the

application. To begin with, the claim states "in the absence of a tie down ply", not in the absence of a mechanical or physical means. "

Here, the office action confuses a discussion of tie down plies as an example of mechanical or physical means for preventing differential movement between prepreg layers with the definition of a tie down ply. Just because the specification identifies tie down plies as mechanical or physical means, it doesn't necessarily follow that all mechanical or physical means would then be tie down plies, (i.e. all squares are rectangles, but all rectangles are not squares.), Hence, the use of stiffened fabric plies in the present invention is but another example, in addition to tie down plies, of a mechanical or physical means for preventing slippage of the prepreg layer. As for the issue of enablement, almost the entire disclosure is dedicated to teaching one of skill in the art how to fabricate the stiffened fabric that are to be used instead of tie down plies in the present honeycomb sandwiches and prepreg plies. Therefore the claims as amended are fully enabled by the specification.

In view of the foregoing, claims 55 and 57-59 are in compliance with 35 USC §112, first paragraph. Reconsideration and withdrawal of the rejection on this basis are therefore respectfully requested.

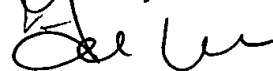
Claims 55 and 57-59 are rejected under 35 USC §112, second paragraph for allegedly being indefinite. In particular, the term "tie down ply" is considered indefinite. This rejection is hereby traversed.

As set forth at length above, a tie down ply is not defined as, but rather given as an example of, a mechanical or physical means to prevent slippage of the prepreg layers. Any term used in the specification should, absent any definition to the contrary therein, be accorded its usual art recognized definition. Therefore, a tie down ply is a specific type of layer that prevents the prepreg layers from slipping during autoclave processing as suggested by Corbett.

Therefore, claim 55 is definite within the meaning of 35 USC §112, second paragraph. Reconsideration and withdrawal of the rejection of claim 55 and claims 57-59 dependent thereon under 35 USC §112, second paragraph are therefore respectfully requested.

If any outstanding issues remain, the Examiner is invited to telephone the undersigned at the number indicated below, before issuing an advisory notice.

Respectfully submitted,



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Examiner

**J. Befumo**

Group Art Unit

**1771**Invention: **PRODUCTS AND METHOD OF CORE CRUSH PREVENTION**

I hereby certify that the following correspondence:

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